

What is claimed is:

[Claim 1] 1. A mechanism for compressing chips, comprising:

a loading component;
a head component disposed under the loading component, with a gap in-between; and
a gimbal disposed between the loading component and the head component to support the gap therebetween.

[Claim 2] 2. The mechanism for compressing chips of claim 1, wherein the head component has a groove and the bottom of the loading component is partially inset into the groove.

[Claim 3] 3. The mechanism for compressing chips of claim 2, wherein the head component comprises:
a first gasket having a contact point with the gimbal; and

a ring piece fixed on the first gasket, wherein the inner edge of the ring piece and the first gasket consist a groove.

[Claim 4] 4. The mechanism for compressing chips of claim 3, wherein the upper surface of the first gasket has a first notch, where the gimbal is disposed.

[Claim 5] 5. The mechanism for compressing chips of claim 3, wherein the head component further comprises a heating plate fixed under the bottom surface of the first gasket.

[Claim 6] 6. The mechanism for compressing chips of claim 5, wherein the head component further comprises a second gasket fixed under the heating plate, which is placed between the first gasket and the second gasket.

[Claim 7] 7. The mechanism for compressing chips of claim 6, wherein the head component further comprises at least one fixing piece joining the ring piece, the first gasket, the heating plate and the second gasket.

[Claim 8] 8. The mechanism for compressing chips of claim 7, wherein the fixing piece comprises a screw.

[Claim 9] 9. The mechanism for compressing chips of claim 1, wherein the bottom surface of the loading component has a second notch, where the gimbal is disposed.

[Claim 10] 10. The mechanism for compressing chips of claim 1, further comprising a plurality of fixing pieces running through the loading component and nailng down the head component, wherein the fixing pieces can slide correlatively to the loading component.

[Claim 11] 11. The mechanism for compressing chips of claim 10, wherein the fixing pieces comprise screws.

[Claim 12] 12. The mechanism for compressing chips of claim 10, further comprising a plurality of elastic joints placed on parts of the fixing pieces that are exposed outside the loading component and the head component.

[Claim 13] 13. The mechanism for compressing chips of claim 12, wherein the elastic joints comprise springs.

[Claim 14] 14. The mechanism for compressing chips of claim 10, wherein the head component comprises a first gasket having a contact point with the gimbal.

[Claim 15] 15. The mechanism for compressing chips of claim 14, wherein the upper surface of the first gasket has a first notch, where the gimbal is disposed.

[Claim 16] 16. The mechanism for compressing chips of claim 14, wherein the head component further comprises a heating plate fixed under the bottom surface of the first gasket.

[Claim 17] 17. The mechanism for compressing chips of claim 16, wherein the head component further comprises a second gasket fixed under the heating plate, which is placed between the first gasket and the second gasket.

[Claim 18] 18. A process for compressing chips, comprising:

the chip compressing mechanism of claim 1;

A step of disposing at least one chip on a substrate; and

A step of compressing the chip on the substrate by the chip compressing mechanism, wherein the pressure from the loading component is transferred by the gimbal through the head component onto the chips evenly in a direction perpendicular to the substrates.

[Claim 19] 19. The process of claim 18, wherein the step of compressing the chip on the substrate by the chip compressing mechanism further comprises the step of heating up the chip simultaneously.